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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Marc A. Blais

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01/26/2005

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Tysons Corner
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EXAMINER

SINGH, DALIP K

ART UNIT

PAPER NUMBER

2676

DATE MAILED: 01/26/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/987,954

Applicant(s)

BLAIS, MARC A.

Examiner

Dalip K Singh

Art Unit

2676

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE ____ MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 September 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) 7 and 19 is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-6, 8-18, 20 and 21 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

Response to Amendment

1. This Office Action is in response to applicant's amendment dated September 20, 2004 in response to PTO Office Action dated August 19, 2004. The amendments to claim(s) 1, 8, 9 and 14; the cancellation of claim(s) 7 and 19 and the addition of claim(s) 21 have been noted and entered in the record, and applicant's remarks have been carefully considered resulting in the action as set forth herein below.

2. Applicant's arguments with respect to claims 1-6, 8-18, 20 and 21 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claim(s) 1-6, 8-18, 20 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,366,289 B1 to Johns in view of U.S. Patent No. 6,567,081 B1 to Li et al.

a. Regarding claim 1, Johns **discloses**

a memory (video memory 310, Fig. 3);

means (compressor 322, Fig. 3) for storing the compressed graphic image data in the memory (video memory 310, Fig. 3);

means (decompressor 332, Fig. 3) for selectively decompressing (...to access compressed chunks...computes the address of the compressed block control data associated with the chunk...communicates with a decompressor 320 to tell which chunk to decompress...allows the read or write operation to proceed...col. 7, lines 55-67; col. 8,

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lines 1-3) a portion of said compressed graphic image data (compressed chunks) as stored in the memory (video memory 310, Fig. 3); and display means (display 334) for displaying the graphic image of interest based on the portion of the compressed graphic image data as decompressed (...for compressed chunks, the compositor instructs a decompressor 332 to decompress the chunk...output pixels to the display 334...col. 8, lines 27-38). However, Johns is **silent about** where selective decompression of image data is based on a selected coverage section of the graphical image data. Li et al. **discloses** selective decompression of only relevant image data (As such, there is no need to decompress the entire...data during the rendering stage...decompression engine 111 operates in a selective manner...the access information requires the accessing of only a portion of compressed data...depending on such parameters as the location of the viewpoint...col. 5, lines 39-67; col. 6, lines 1-5). Therefore, it would have been obvious to a person of ordinary skill in the art at the time invention was made to modify the device as taught by Johns with the feature “selective decompressing of image data which only the relevant data ” as taught by Li et al. **because** it results in less processing time than conventional decompression units resulting in better performance.

b. Regarding claims 2 and 3, John **discloses** means for storing the compressed graphic image data in the memory further includes means for storing the compressed graphic image data in a linked list in the memory (...the MAUs...comprise a compressed chunk are linked together in a linked list format...col. 14, lines 52-55, Fig. 6), said linked list including a plurality of nodes (Fig. 5 illustrates...data structure...to store the locations and state of chunks in the virtual frame buffer...col. 10, lines 5-22, Fig. 5; ...Fig. 7...illustrating...chunks in the...frame buffer and individual 8x8 pixel blocks in each

chunk...col. 16, lines 45-67). The instant application specification on page 13, lines 3-5 describe storage in blocks of memory as nodes of a linked list similarly.

c. Regarding claim 4, John **discloses** means for flagging, as unused, nodes in the linked list that do not include compressed graphic image data for the graphic image of interest (...as shown in Fig. 4, the VFB controller updates a re-use data structure, which is used to identify memory...that can be re-used...updates the flag...to indicate that the chunk is uncompressed...col. 11, lines 1-67). John **discloses** a re-use data structure as compressed data and uncompressed data is being processed which is similar to flagging unused nodes. Therefore, it would have been obvious to a person of ordinary skill in the art at the time invention was made to consider flagging of re-use list similar to flagging unused nodes **because** it provides for a better memory management of the system.

d. Regarding claim 5, John **discloses** means for determining if any nodes in the linked list are flagged as unused (...it reclaims physical memory previously allocated to a compressed chunk...col. 11, lines 6-15), and means for replacing compressed graphic image data in a node flagged as unused, if any in the linked list, with the compressed graphic image data that include compressed data for the graphic image of interest (...it reclaims physical memory previously allocated to a decompressed chunk after it is re-compressed...col. 11, lines 1-40).

e. Regarding claim 6, John **discloses** wherein said means for storing the compressed graphic image data in a node in the linked list further includes means for adding to the linked list a node for storing the compressed graphic image data if no nodes in the linked list are flagged as unused (...the VFB controller adds new entries to the re-use list each time a chunk is decompressed...col. 11, lines 33-50).

f. Regarding claim 8, it is similar in scope to claim 1 and is rejected under the same rationale.

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- g. Regarding claim 9, it is similar in scope to claim 1 above and is rejected under the same rationale.
- h. Regarding claim 10, it is similar in scope to claim 2 above and is rejected under the same rationale.
- i. Regarding claim 11, it is similar in scope to claim 4 above and is rejected under the same rationale.
- j. Regarding claim 12, it is similar in scope to claim 5 above and is rejected under the same rationale.
- k. Regarding claim 13, it is similar in scope to claim 5 above and is rejected under the same rationale.
- l. Regarding claim 14, it is similar in scope to claim 1 above and is rejected under the same rationale.
- m. Regarding claim 15, it is similar in scope to claim 2 above and is rejected under the same rationale.
- n. Regarding claim 16, it is similar in scope to claim 4 above and is rejected under the same rationale.
- o. Regarding claim 17, it is similar in scope to claim 5 above and is rejected under the same rationale.
- p. Regarding claim 18, it is similar in scope to claim 6 above and is rejected under the same rationale.
- q. Regarding claim 20, Johns as modified by Li et al. **discloses** compressed data including overhead data (...compression engine... outputs a compressed bitstream that includes encoded frequency coefficients associated with...data...col. 3, lines 37-56).
- r. Regarding claim 21, it is similar in scope to claim 1 and is rejected under the same rationale.

Conclusion

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Dalip K. Singh** whose telephone number is **(703) 305-3895**. The examiner can normally be reached on Mon-Thu (8:00AM-6:30PM) Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, **Matthew Bella**, can be reached at **(703) 308-6829**.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks
Washington, D.C. 20231

or faxed to:

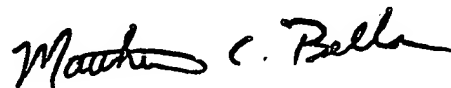
(703) 872-9314 (for Technology Center 2600 only)

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA, Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office whose telephone number is (703) 306-0377.

dks

January 21, 2005



MATTHEW C. BELLA
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600